REMARKS

Claims 1-3, 5-18 and 23-28 are pending in the present application prior to this response. Claims 1-3, 5-18 and 23-28 were rejected, and claims 10-18 were withdrawn from consideration. No claims have been amended herein. Reconsideration of all rejected claims is requested.

I. Rejection of Claims 1, 2 and 4-7 Under 35 U.S.C. §112, First Paragraph

Claims 1-3, 5-9, and 23-28 were rejected under 35 U.S.C. §112, First Paragraph as failing to comply with the written description requirement.

The Examiner states that there appears to be insufficient support for an embodiment having a linear array of photodetectors and an embodiment having at least two position sensors. The Examiner has kindly invited the Applicant to cite specific sections of the specification that disclose such features in combination with the other elements of the invention.

The Applicant commences the rebuttal to the rejection of claim 1 with a review of claim 1, which is replicated as follows:

> A scanning device comprising:
>
> a substrate;
>
> a linear array of photodetectors operatively connected to said substrate; and
>
> at least two position sensors, each of said position sensors comprising:
>
> a first portion wherein said first portion is operatively connected to said substrate;
>
> a second portion wherein said second portion is movably connected to said first portion along a first axis; and
>
> a two-dimensional photosensor array attached to said second portion.

The Applicant notes that references are provided throughout the specification related to the position sensors being located in a scanning device. The scanning device is referred to as reference numeral 100 throughout the specification. An embodiment of the scanning device 100 is illustrated in Fig. 2A and Fig. 2B.

Much of the specification is focused on the position sensors having two portions that are movably connected to one another. As described throughout the specification, the position sensors may be located in the scanner 100. The use of optical position sensors is provided in the background and in many of the reference patents that have been incorporated into the specification. One such disclosure in the application is provided between page 4, line 34 and page 5, line 6, which is replicated as follows:

> In some scanning devices, the position sensor takes the form of an optical sensor which may be rigidly affixed to the scanning device. The optical sensor is used to determine the position of the scanning device relative to the object being scanned. The optical sensor is a two-dimensional array of photodetectors that periodically generates image data from a small two-dimensional area portion of the object being scanned.

The use of two such position sensors is described between page 5, line 28 and page 6, line 1, which is replicated as follows:

> Some scanning devices have several of these two-dimensional optical sensors rigidly affixed at various positions relative to the linear array of photodetectors. For example, the scanning device may have two optical sensors spaced a distance from each other. The scanning device is able to compare the movement data from each optical sensor to determine the amount of movement, including rotational motion, the scanning device has undergone.

The linear array of photodetectors is also described in the specification. One example of the linear array of photodetectors is provided at page 1, lines 30-35, which are replicated as follows:

> The image of the scan line portion of the object is focused onto a linear array of photodetector elements (sometimes referred to herein simply as photodetectors). The photodetectors may, as an example, be mounted to a plurality of linearly arranged electronic segments such as contact image sensors as are known in the art.

The scanning device 100 generates scan line type data, which is described at page 25, lines 25-28 as follows:

> The image data generated by the scanning device 100 is in the form of a plurality of scan line portions skewed over the surface 182 of the sheet of paper.

The Applicant contends that the disclosures listed above describe the linear array of photodetector elements and the user of two position sensors in enough detail to overcome the rejection per 35 U.S.C. §112, First Paragraph. In the alternative, the Applicant notes that several patents have been incorporated by reference into the application. These patents describe the user of a linear array of photodetectors along with two optical position sensors.

The Applicant incorporated United States patent 5,578,813 (the '813 patent) into the specification at page 12, lines 6-14. The '813 patent provides a description of using optical position sensors in a scanning device. The description includes a linear array of photodetectors and two position sensors. Reference is made to the Abstract of the '813 patent, which states, in part:

> A scanning device and method of forming a scanned electronic image include an imaging sensor and at least one navigation sensor. In the

preferred embodiment, the imaging sensor is a linear array of sensor elements, with a two-dimensional navigation sensor array at each end.

Accordingly, the '813 patent, which was incorporated into the present application discloses a linear array of photodetectors with two position sensors. Further disclosures are made throughout the '813 patent. For example, the above-described disclosures are described at column 3, lines 52-58 as follows:

> In the preferred embodiment, the image sensor is a linear array of electrooptical elements, while the navigation approach utilizes at least one two-dimensional array of navigation sensor elements. By placing a separate two-dimensional navigation array at each end of the image sensor, the scanner is afforded three degrees of freedom of movement.

Based on the foregoing, the Applicant submits that claim 1 conforms to 35 U.S.C. §112, Paragraph one. Accordingly, claim 1 is in condition for allowance.

CLAIMS 2, 3, 5-18, and 23-28

Claims 2, 3, 5-18, and 23-28 were rejected on the same grounds as claim 1. Accordingly, the rebuttal set forth above applies to the rejections of claims 2, 3, 5-18, and 23-28. Thus, the claims are now in condition for allowance.

II. Objection to drawings under 37 CFR 1.83(a)

Newly added Fig. 2B contains elements of Fig. 2 of Patent Number 5,578,813, which is incorporated by reference into the application. Fig. 2B shows every feature of the invention specified in the claims, which include, the linear array of photodetectors (230) connected to the substrate (210), and the scanning device comprising at least two position sensors (200). The Applicant contends that the objection to the drawings are now overcome.

All of the pending claims are believed to be in condition for allowance and a notice to that effect is earnestly solicited.

Respectfully submitted,
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